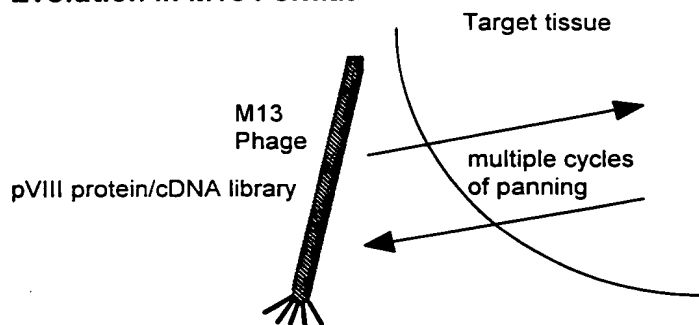


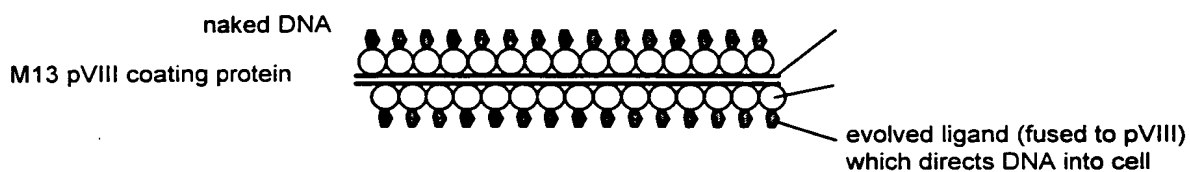
Figure 1

Protein-Coated DNA Vaccines

Evolution in M13 Format



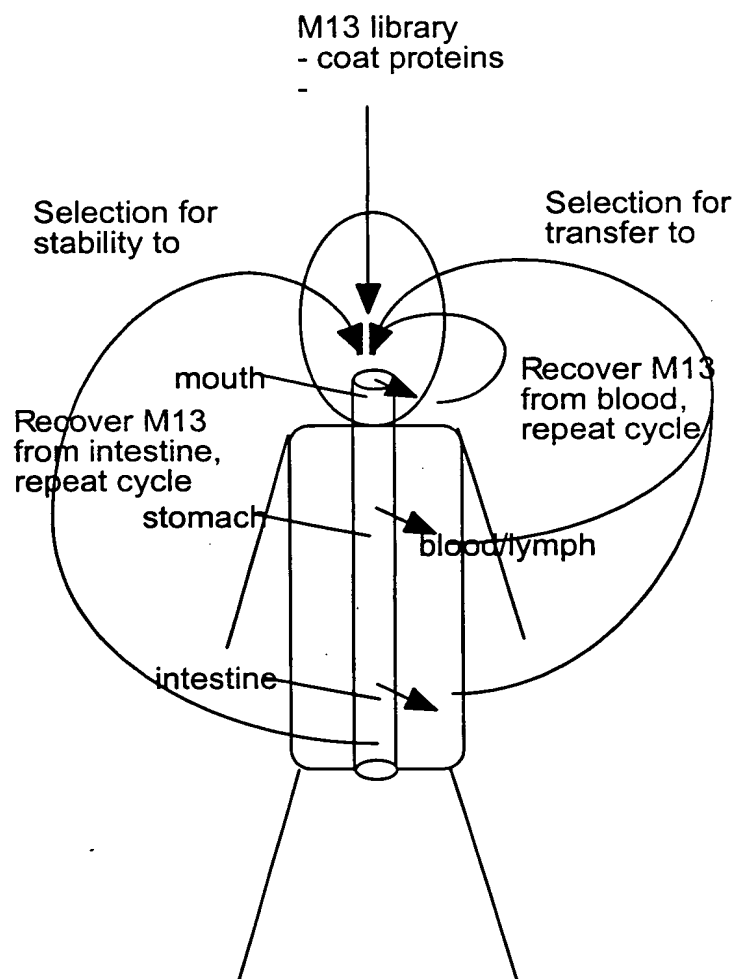
Final Production Format



660720-988/4260

Figure 2

M13 Evolved for Oral Delivery



660720-988/1260

60720-98841260

Figure 3: Alignment of bacterial enterotoxin DNA sequences illustrating the feasibility of family shuffling.

E. coli enterotoxin B	1	60
E. coli enterotoxin B (porcine)	ATGAATAAAGTAAATGTTATGTTTATTTACGGCGTTACTATCCTCTCTATGTGCATAC	
Cholera toxin SubB DNA-seq	ATGAATAAAGTAAATGTTATGTTTATTTACGGCGTTACTATCCTCTCTATATGCACAC	
E. coli enterotoxin B	61	120
E. coli enterotoxin B (porcine)	GGAGCTCCCAGTCTATTACAGAACTATGTTTCGGAATATCGCAACACACAAAATATATACG	
Cholera toxin SubB DNA-seq	GGAGCTCCCAGACTATTACAGAACTATGTTTCGGAATATCGCAACACACAAAATATATACG	
E. coli enterotoxin B	121	180
E. coli enterotoxin B (porcine)	ATAAATGACAAGATACTATCATATACGGAATCGATGGCAGGCAAAAGAGAAAATGGTTATC	
Cholera toxin SubB DNA-seq	ATAAATGACAAGATACTATCATATACGGAATCGATGGCAGGCAAAAGAGAAAATGGTTATC	
E. coli enterotoxin B	181	240
E. coli enterotoxin B (porcine)	ATTACATTTAAGAGCGGCGCAACATTTCAAGTCGAAGTCCCGGGCAGTCAACATATAGAC	
Cholera toxin SubB DNA-seq	ATTACATTTAAGAGCGGCGCAACATTTCAAGTCGAAGTCCCGGGCAGTCAACATATAGAC	
E. coli enterotoxin B	241	300
E. coli enterotoxin B (porcine)	TCCCAAAAAAAGCCATTGAAGGATGAAGGACACATTAAGAATCACATATCTGACCGAG	
Cholera toxin SubB DNA-seq	TCCCAAAAAAAGCCATTGAAGGATGAAGGACACATTAAGAATCACATATCTGACCGAG	
E. coli enterotoxin B	301	360
E. coli enterotoxin B (porcine)	ACCAAAATTGATAAATTATGTGTATGGAATAATAAAACCCCAATTCAATTGCGGCAATC	
Cholera toxin SubB DNA-seq	ACCAAAATTGATAAATTATGTGTATGGAATAATAAAACCCCAATTCAATTGCGGCAATC	
E. coli enterotoxin B	361	375
E. coli enterotoxin B (porcine)	AGTATGGAAAACTAG	
Cholera toxin SubB DNA-seq	AGTATGGAAAACTAG	

Figure 4A

Generation of human dendritic cells from blood monocytes by culture in the presence of IL-4 and GM-CSF for seven days; phenotype of the cells before and after the culture.

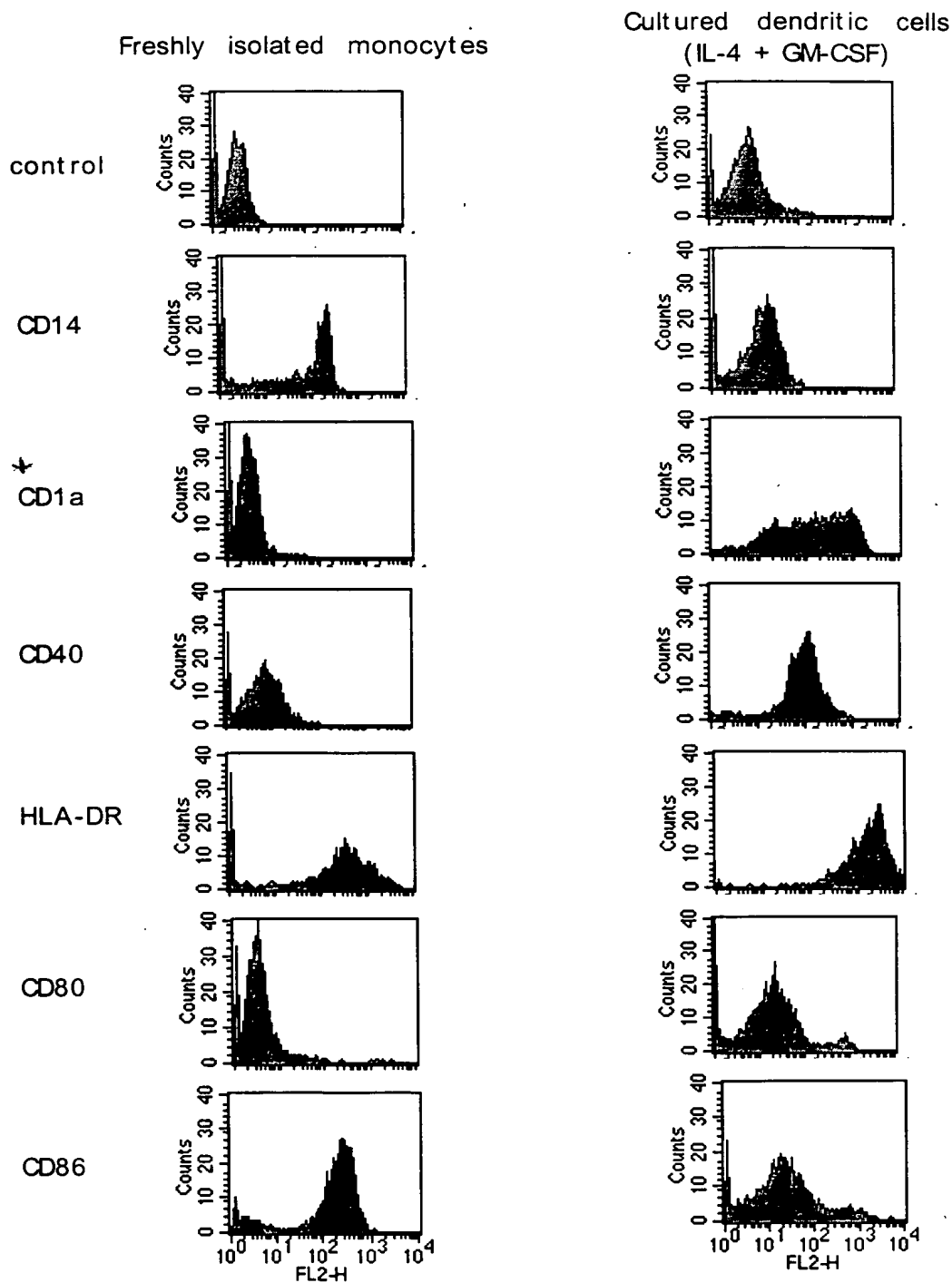
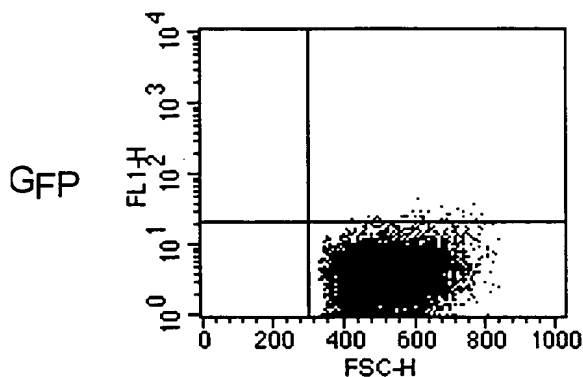


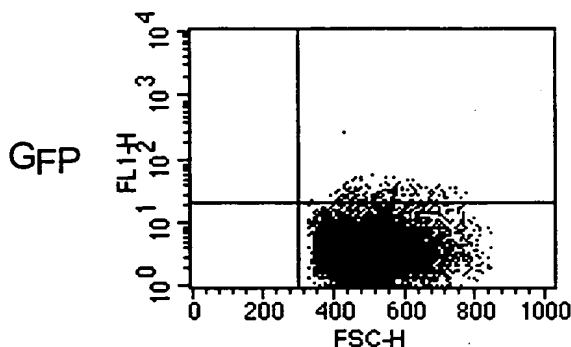
Figure 4B

Transfection of cultured dendritic cells by a plasmid encoding GFP and analysis by flow cytometry.



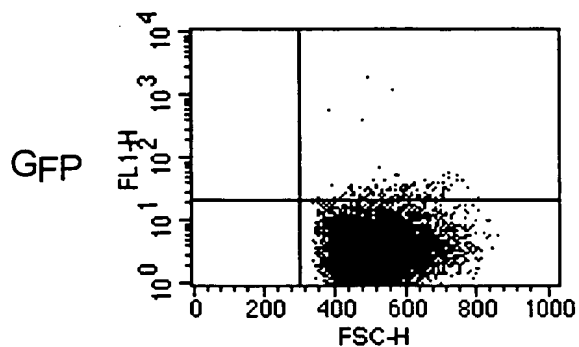
non-transfected

Quad	Events	% Gated	% Total
UL	0	0.00	0.00
UR	34	0.34	0.34
LL	0	0.00	0.00
LR	9966	99.66	99.66



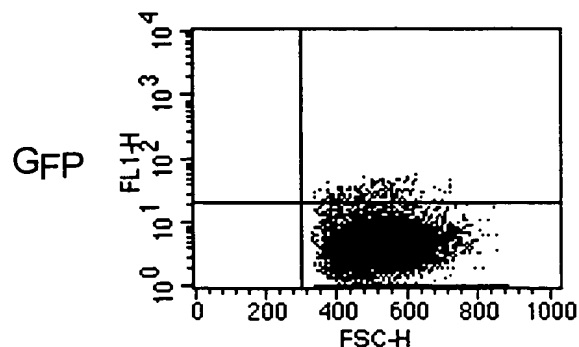
DOTAP 20ul

Quad	Events	% Gated	% Total
UL	0	0.00	0.00
UR	155	1.55	1.55
LL	0	0.00	0.00
LR	9845	98.45	98.45



DOTAP 30ul

Quad	Events	% Gated	% Total
UL	0	0.00	0.00
UR	139	1.39	1.39
LL	0	0.00	0.00
LR	9861	98.61	98.61



Superfect

Quad	Events	% Gated	% Total
UL	0	0.00	0.00
UR	164	1.64	1.64
LL	0	0.00	0.00
LR	9836	98.36	98.36

660720-98824260